



Technological University Dublin

EXTERNAL VALIDATION REPORT

**Higher Certificate in Telecommunications and
Data Network Engineering
Apprenticeship Programme
(Level 6)**

School of Engineering

Department of Electronic Engineering

Panel Meeting date:	11 th June 2019	
Decision: <i>tick one only</i>	Recommended	
	Recommended subject to modification	√
	Not recommended	

Proposed Commencement Date:	September 2019
Period of Validation:	5 years

EXTERNAL REVIEW PANEL REPORT

PART 1:

1.1 GENERAL INFORMATION

School	Engineering
Department	Electronic Engineering
Date of panel visit	11 th June 2019
Programme evaluated	Higher Certificate in Telecommunications and Data Network Engineering
Programme approved title	Higher Certificate in Telecommunications and Data Network Engineering
Exit Awards	N/A
Delivery Mode(s)	Full-time, Part-time, Blended, On-line
Panel	<p>Dr Frances Hardiman, Head of Faculty of Engineering, Institute of Technology, Carlow</p> <p>Pat McCormick, Head of Department, Dept. of Engineering Trades and Civil Engineering, DKIT</p> <p>Conor O'Callaghan, Head of Service Delivery, Vilicom, Dublin</p> <p>Secretary: Sinéad O'Neill, Quality Manager, TU Dublin – Tallaght Campus</p>

1.2 INSTITUTE STAFF

Name	Grade / Responsibility
James Wright	Head of Department
Brian Keogh	Programme Leader
Seamus Kearney	Lecturer
Jim Roche	Lecturer
John P Byrne	Senior Technical Officer
Aideen Darker	Lecturer
David Maguire	Technical Officer
Siobhan O'Callaghan	EL solutions
Aidan Barry	KN Group
John Byrne	Lecturer
Barry Philips	Vodafone
Damien Meere	BT

PART II COMMENDATIONS, RECOMMENDATIONS & CONDITIONS

The External Review panel recommends the validation of the Programme and award:

Higher Certificate in Telecommunications and
Data Network Engineering

Subject to the conditions and recommendations set out below:

2.1 Commendations:

Points of note commended by the panel:-

1	The panel recognises the niche area that this apprenticeship will address and the requirements for this apprenticeship in the telecommunications sector.
2	The panel commends the input and leadership of both academia and the industry members of the group in both the technical and soft skills of the programme.
3	The panel commends the positive receipt of constructive feedback and input provided during thorough validation discussions.

2.2 Conditions:

The evaluation panel requires that the Programme Development Team take note of the following conditions and that a satisfactory response to those conditions must be received before the validation is considered by Academic Council of the Institute.

1	<p><u>Within the document, provide a work-based learning chapter that includes the following:</u></p> <ul style="list-style-type: none">a. Clarity around how work-based practice will be managed.b. Explicitly state work based arrangement for each modulec. Explicitly state the tasks assigned to each module. <p>Response; Refer to new sections 4.12 (Management of the Programme) and 4.13 (Work-Based learning)</p> <ul style="list-style-type: none">a. Clarity around how work-based practice will be managed. See new section 4.13.2b. Explicitly state work based arrangement for each module See new section 4.13.4c. Explicitly state the tasks assigned to each module. See new section 4.13.5 and new Appendix 4.
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2	<p><u>Within the document:</u></p> <p>a. Provide an organisational structure and ensure the document provides clear detail on the management of the programme, including the steering group, programme leader, industry mentor, work based learning lecturer, roles and responsibility etc. Who is chair of the Steering Group, when will they meet etc.</p> <p>Response: the organization structure, with respect to the programme is set out in a new section, 4.12, including Fig. 5 and Fig.6.</p> <p>b. Provide clarity on the delivery of the programme and chart the student engagement over the full two years. Provide a graphic that makes it explicitly clear.</p> <p>Response; A new section on the delivery of the programme is provided in new section 4.14 (Student Engagement)</p> <p>c. Provide clear guidelines as to who are the current industry stakeholders, how additional companies from industry can join and benefit from the programme. Provide clear guidance as to how places on the programme will be distributed to industry members considering company size, demand for places and equal access for all companies from industry</p> <p>Response;</p> <p>A new section , 4.12.3 – 4.12.5 outlines the process for additional companies to join the programme. Section 4.12.6 outlines the general procedures for allocation of student places</p>
3	<p><u>Modules</u></p> <p>a. Review Learning Outcomes for all modules and reduce/balance indicative content as appropriate.</p>

Response: The PDC has reviewed all modules. The number of learning outcomes are now consistent across all modules. Refer to volume II

- b. Indicate whether Learning Outcomes are assessed on or off the job.

This is now indicated on the module syllabi in Volume II

- c. Clarify how these are spread over 2 years.

A two year road map is provided in Volume I section 4.14

- d. Ensure assessments are appropriate across all modules.

Response: The PDC and CSG reviewed all assessments against best practice in the industry. See Volume II for assessment details on each module. In addition an indicative list of tasks for each module is given in Volume I. Appendix 4.

- e. Make work-based learning tasks explicit in the modules.

Response; Summary WPL tasks are now included in the module syllabi. In general, each module contains five WBL tasks that allow the apprentice to demonstrate competencies.

It is highly recommended to have a Teaching & Learning or independent person review the Learning Outcomes to ensure they are Level 6, with verbs that can be easily mapped to assessment and are balanced across modules (for example 4-5 for a 5 credit module)

Response: This was carried out by a qualified expert who provided feedback to all authors. Please refer to the LO section for each module in Voume II.

- f. Make the repeat mechanism explicitly clear for every module.

Consider a flexible approach to modules completed in the work environment.

Response; The repeat mechanism has been changed within Module Builder for each module to reflect this recommendation. Refer to Volume II.

4	<p><u>Induction</u></p> <p>a. Clearly outline the separate induction programme for instructors and mentors. An indicative timetable would be useful. Response; Refer to Vol. I, 4.13.6 which includes an agenda and module for the mentor induction process. Refer to 4.13.7 for the learner welcome event and induction.</p> <p>b. Clearly specify mentor requirements, qualifications (essential for SOLAS approval) and training Response: Refer to Vol.I, 4.13.3 and Appendix 1,(Glossary of Terms)</p>
5	<p><u>Application Process</u></p> <p>a. Ensure entry and progression requirements are transparent and clear for all potential applicants. Response: clarified in section 4.7.1</p> <p>b. Provide an overview of the application and registration process to include roles and responsibilities for both TU Dublin and Industry Consortium. Response: Please refer to Vol I, 4.12.7 and Fig 7 (Flow Chart of Registration Process)</p>

2.3 Recommendations:

Recommendations are suggestions made by the Programme Evaluation Panel in the spirit of improving the proposed Programme. While these are not binding, the reasons for not incorporating a recommendation have to be clearly stated by the Programme Development Team in its response to the Evaluation Report.

1	<p>Consider separating work-based and academic learning rather than having integrated work-based learning and academic learning.</p> <p>Response: All modules are updated to separate off-the-job and on-the-job learning. Refer to Volume II</p>
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2	<p>Consider addressing multiple learning outcomes using measurable work-based activities.</p> <p>Response: Work based learning activities are now specified in the syllabi under assesement. Refer to Volume II</p>
3	<p>Consider revising graduate attribute profile e.g. removing references to being physically fit/enjoying working outdoors.</p> <p>Response: This has been removed</p>
4	<p>Consider including occupational profile, as agreed by apprenticeship council, to documentation.</p> <p>Response: this is included in new section 4.5 (Occupational Profile)</p>
5	<p>Consider outlining SOLAS requirements and their potential impact on RPL and advanced entry arrangements.</p> <p>Response: RPL and advanced entry are not considered in this industry lead programme. See end of section 4.7.3</p>
6	<p>Outline the roles and responsibilities for TU Dublin and Industry with regard to induction for students.</p> <p>Induction for students is described in new section 4.13.7</p>
7	<p>Outline specialist resources and training facilities required to ensure any partner institutes in the nationalization of the apprenticeship are clear on the requirements.</p> <p>Response; Revised subsections Vol I, 6.2 - 6.6 now specify the required information, including Fig, 12, Fig. 13 and Table 7 (Specialized Telecommunications Training Resources)</p>

PART III FINDINGS OF THE VALIDATION PANEL

3.1 INTRODUCTION

The panel was welcomed to the Institute by the Head of School and Head of Department. The panel met in advance of the meeting to discuss the submission document and plan for the meeting with management and staff of the department.

3.2 MEETING WITH MANAGEMENT AND STAFF

The Panel was given an overview of the rationale for the Apprenticeship Programme, approved by SOLAS, by the Head of School and Programme Leader. It is intended that the Apprenticeship Programme will be run by TU Dublin in partnership with an Industry Consortium.

3.3 Programme Title and Award Title.

The Panel was satisfied that the Programme and Award title are appropriate. Whether the award is appropriate was discussed and it was noted that the learning outcomes are mapped to engineering award standards.

3.4 Justification for the Programme

The justification for the proposed Programme was discussed and the panel was satisfied that the Programme fulfils skills requirement of employers within industry catchment area. The Panel noted that this is an Industry led apprenticeship programme in response to identified skill shortages in the telecommunication and data centre sectors.

3.5 Conformance with Mission and Strategy

The panel was satisfied that the proposed programme is in keeping with strategic objectives with regard to the widening of participation in higher education, creation of career ready graduates for industry, providing comprehensive lifelong learning opportunities for the region, and educational supports to industry.

3.6 Access, Transfer and Progression Arrangements

The panel investigated the stated arrangements for access, transfer and progression. The Panel made it a condition of approval that clarity be provided in relation to ATP arrangements, see above.

3.7 Programme Structure and Design

The Programme structure and design were described by the Programme Team. The Panel made it a condition of approval that clarity be provided in relation to the structure and design of the Programme. See above.

3.8 Programme Learning Outcomes and Award Standards.

The panel noted that the learning outcomes need to be revised to ensure they are compliant with the Award Standard. Whether elements of the Programme are pitched at the appropriate level for an apprenticeship programme was discussed. The Panel made it a condition of approval that learning outcomes are reviewed. See above.

3.9 Teaching and Learning Strategy

The proposed approaches to teaching and learning were presented and justified. The flexible approach in the delivery is commended by the panel but it is essential that clarity regarding structure and schedule of delivery over the two years is outlined. See above.

3.10 Learner Assessment

The overall assessment strategy incorporates the use of a variety of assessment tools. The Panel made it a condition of approval that clarity is provided in relation to the assessment strategy, methodology, instruments and the training of the assessors. The arrangements for students to repeat any failed elements of the assessments also need to be clarified, see above.

3.11 Quality Assurance

The procedures in developing the Programme were outlined to the panel as per the Institute's quality assurance procedures. The panel was satisfied with the procedures that were applied to the development of the proposed Programme comply with the Institute's QA procedures. The panel noted that greater detail was required to ensure that the quality assurance mechanisms are in place to ensure its provision, monitoring and review.

3.12 Information Provision

The panel reviewed the proposed information which would be made available to learners, potential learners and employers. The panel noted that the information originally presented did not adequately explain the programme content and structure and is a requirement of the document. This can be addressed in the conditions/recommendations stated.

3.13 Library and Physical Facilities / Resources

The panel was satisfied that the library and physical resources available to deliver the proposed Programme are adequate to the task. The programme will require specialist resources in the form of a 'dummy' compound and network installation, that should be included in the document.

3.14 Academic Staff and Qualifications

The panel was satisfied that the lecturing and support staff is available within the Institute to deliver the content of this Programme. The panel noted that the on-the-job elements of the programme would require guidance and assessment and that there was a need to clarify the recruitment, qualification, training and support for the relevant personnel.

PART IV: PROGRAMME SCHEDULES

Amended Programme Schedules for each stage of each Programme to incorporate the conditions and recommendations set out in under points 2.2 and 2.3, and all Programme Abstracts, must be submitted with the Response to this Panel Evaluation Report.

Part V: Approval

Programme Evaluation Report Approved by:

<i>Signature:</i>	<i>Signature:</i>
<i>Print name:</i> Dr Frances Hardiman	<i>Print name:</i> Sinéad O'Neill
Chairperson to Panel	Secretary to Panel
<i>Title:</i> Head of Faculty, Engineering. Institute of Technology, Carlow	<i>Title:</i> Academic Quality Manager
Date:	Date: